XXXVII. *A Letter from Father* d'Incarville, *of the Society of* Jeſus, *at* Peking *in* China, *to the late* Cromwell Mortimer, *M. D. R. S. Secr.*

SIR, Pekin, Nov. 15, 1751.

Read June 7, 1753. I SHOULD be glad to have it in my power to do more for your illuſtrious Society, both as to my ſituation and condition. We are very much confin'd at Peking; we have not even the liberty of going where we pleaſe by ourſelves to ſee things; nor can we, with prudence, believe the reports of the Chineſe, who make nothing of deceiving us, if they can defraud us of our money. When we can do no otherwiſe, we endeavour to prevent our becoming their dupes, as well as we can: and yet, notwithſtanding all our precautions, we cannot anſwer for what intelligence we have this way, ſo well as for what we affirm to have ſeen ourſelves. Every year I ſend to our gentlemen of the Academy at Paris what I can diſcover upon ſuch matters, as I know concern them; which has given me the opportunities of ſending you ſeveral curious things in natural hiſtory.

You ought to have received laſt year ſome leaves and flowers of different trees, beſides a good number of ſeeds. The leaves and flowers of the varniſh-tree, which I ſent, come from the province of Nan King. This tree is different from that I ſaw in the king's garden at Paris. The latter is the ſame with what

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what I ſaw at Macao; which was brought from Miſſiſſippi into France.

We have not in Europe the tree, from whoſe fruit the Toeng yeou is drawn. It were to be wiſh'd they could raiſe it there. The Toeng yeou is an oil, or natural varniſh, drawn by expreſſion from the fruits, which I have ſent you, of which they make a very great trade in China. It coſts but very little, the pound weight being worth about 7 or 8 ſols of our money. I heard ſay, that they ſell it at Paris under the name of China varniſh. It is excellent for preſerving furniture, giving them a poliſh not inferior to our varniſhes of Europe, which coſt ſo much money. Perhaps they may make ſome attempts to uſe it in Europe; but they will not ſucceed, becauſe they know not how to prepare it. This oil is ſo common in China, that the greateſt part of the people, in tolerable circumſtances, rub over their timber with it, giving it what colour they pleaſe. It not only adorns their houſes, but alſo preſerves the wood. The columns, that ſupport their houſes, and thoſe of the great room where the emperor's throne is, are varniſh'd with no other than this oil.

The Kou chou is a tree, of the bark of which they make the beſt paper in China. The common paper of their books, which looks yellowiſh, is made of particular ſpecies of Bambou, of which they prepare the young ſhoots, as we prepare hemp. They whiten it, by boiling it in lime-water: in this manner they prepare the Kou chou. There is no ſilken paper in China; all the different kinds of paper here are made either of bark, hemp, or of the ſtraw of corn or rice. Sometimes they blend with this laſt the ſtalks

ſtalks of the Typha *. The paper made of hemp or ſtraw ſerves only for wrapping up goods, or to make paſteboard; and that made of the bark of the cotton-plant ſerves for fans, being leſs apt to crack than any other white paper.

The white wax, produced by certain inſects, is a very curious and profitable thing. I have not yet been able to ſee any of them. What has been told me by one of our miſſionaries, who has bred them himſelf, is not ſufficient to give a proper idea of them. As to the manner of their depoſiting this wax, it appears to me, that there is ſome analogy between it, and the manner of the gum lac's being depoſited by certain ants †.

In the emperor's palace they very rarely uſe any other candles, than ſuch as are made of this wax, becauſe it never emits any ſmoke. The learned therefore uſe them only, when they compoſe an exerciſe upon their examination for degrees: for then they are confined in very ſmall rooms, where the ſmoke of tallow-candles would incommode them greatly. I believe the chief conſumption of this wax is owing to

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* Typha paluſtris major of Caſpar Bauhin. Cat's-tail.

§ In order to explain this paſſage, I take the liberty of making the following remark. The Lacca-tree is the *Jujuba Indica* of the great Ray; which produces this gum. The letter-writer is miſled by what Garcias ab Horto ſays about it, that certain large-wing'd ants make this gum out of the juice ſuck'd from this tree, and depoſit it upon the *furculi*, &c. of the ſame: but the celebrated Ray and J. Bauhin ſay, it is exudated, and by the heat of the ſun concreted into the form, in which it is found upon the parts of this tree. There are other trees, which produce this gum, as well as this, mention'd by Hermannus.

to their coating tallow-candles with it, which I ſhall mention by-and-by. This wax is procured by boiling the matter raſped off the branches of the tree, the leaves of which are the proper nouriſhment of theſe inſects, in a large veſſel of water; the wax ſwims at the top, and, when cold, it is taken off in a cake.

The berries of the tallow-tree are of great uſe in the ſouthern provinces, where there are very few ſheep. Almoſt all the candles, ſold there, are made of the oil drawn from theſe berries. They procure this oil in the ſame manner, that I have mention'd concerning the wax; and as this oil is not of ſo good a conſiſtence as tallow, for its coheſion, when candles are made of it, they dip them in the white wax mention'd: the external coat, thus made, prevents them from guttering *. At Peking the ſame thing is done with tallow-candles; nor do I ever remember to have ſeen them run down. I imagine, that our bees wax would anſwer the ſame purpoſes with this white wax of China.

The ſeeds of the Yen tchi come from a plant, which I think very particular; at leaſt I cannot recollect any thing like it. From theſe ſeeds or berries, when very ripe, a tincture of a fine red is drawn, as may be ſeen in the flakes of cotton charged with this colour, ſold here. They moiſten them with a little warm water, and then expreſs the colour, which is afterwards evaporated to a drineſs, and ſerves for water-colours.

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* This is applicable to the green wax of Miſſiſſippi.

The Perſicaria, of which they make indigo in and about Peking, merits attention. Indigo is alſo made of the *Perſicaria maculata*, with which the banks of rivers and ſtreams often abound; but it is of an inferior quality to that made with the other Perſicaria, the ſeeds of which I ſent you; and this even is not of equal value with that made of the anil, ſuch as is made in the ſouthern provinces here, and in thoſe of America.

The ſtones of apricots come from a ſpecies of tree, whoſe fruit is not eatable. Theſe trees are only cultivated for theſe ſtones, from which an excellent oil is produced for burning; and which, inſtead of olive-oil, we uſe for our ſallads.

The *Hoai tze* are the cluſters of the flower of a baſtard Acacia, from whence a moſt beautiful yellow tincture is drawn, by boiling them with a little alum. The *hoang tchi tze* produces yet a finer tincture: but the fineſt yellow colour of China comes from the *hoang pe pi*; and theſe three are prepared in the ſame manner.

A kind of ſtuff is made from the cods of the wild ſilk-worm, called *kien tcheou*, excellent for wear, when made for gain, but chiefly that, which is made from ſuch cods, as I ſent you in 1749. It is ſcarce, and dear. There is another kind of *kien tcheou*, of of which they ſell a large quantity at Canton: it is made of the ſilk drawn from other cods, ſome of which I ſend you this year. Theſe cods are capable of being wound on wheels or ſpindles. The firſt I ſent are only wound on ſpindles; but firſt they muſt be boiled in a ſtrong lye, made of the aſhes of the ſtalks of the *Sarazin* corn, till they are capable of

being pull'd aſunder with one's fingers, in order to turn them inſide-out, and take out the fragments of the chryſalis; and as this kind of ſtuff is work'd like other cloth, the weavers do the reſt.

The fruits of the *tong yeou*, and of the tallow-tree, which you ſhould have received laſt year, were freſher than thoſe I ſent before.

This year you will receive the cods of ſilk, which makes the ſilk called *kien tcheou*, with the butterflies, which come from them. The other things, which I ſent, want no explanation.

An Anſwer to the Queſtions upon the Natural Hiſtory *of* Foſſils.

THE empire of China abounds in mines of all ſorts, as gold, ſilver, copper, tin, lead, iron, *&c.* The provinces, which produce the greateſt quantity, are *Yun nan*, and *See tchouen*. The two greateſt rivers of China, *Kiang*, and *Hoang ho*, ſend down quantities of gold ſand. The former takes its ſource in the province of *See tchouen*, and the latter from *Coconor*: but they find mines of gold and ſilver in the provinces of *Yun nan*, *See tchouen*, *Chen ſi*, *Chan tong*, *Hou kouang*, *Fou kien*, *Kouei tcheou*, *Pe tche ſi*; but, for political reaſons, they work but few of them. I believe the principal is, leſt the greedineſs of gain ſhould excite popular inſurrections. They open them ſometimes in one place, ſometimes in another: but, upon the leaſt appearance of a riſing, they immediately ſhut them up again. We cannot give any account of what is deſired, concerning the manner of working the ſeveral mines. We are not

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in a way of informing ourſelves. I have endeavour'd for ſeveral years to procure ſpecimens of the different mines, but could not yet obtain them. If, hereafter, I can diſcover any thing worth while in this matter, I ſhall not fail to communicate it. As to what regards petrifactions, I have only ſeen a few crabs, pieces of wood, and ſome bones, which I take to be thoſe of buffaloes. I have ſent into France ſpecimens of all the ſimple drugs ſold by the druggiſts at Peking; among which are ſome bits of minerals, petrified bones, *&c.* to which I expect an anſwer next year, and ſhall be better able to chuſe what to ſend of ſuch things, as ſhall be deſired. This collection is one of the affairs, that coſt me moſt trouble.

The article, that regards the deluge, makes me imagine, that the liſt of theſe things comes from the celebrated Sir Hans Sloane. I ſhould be glad to have an opportunity of doing him pleaſure, and I would do it moſt readily. All I know of it is this; the Chineſe have but a very confuſed idea of an univerſal deluge. They only conclude from things ſeen upon the ſurface of the earth, that there muſt formerly have been ſome terrible hurricane, and that the ſea had cover'd the face of the earth. A great mandarin, who had a better underſtanding than the Chineſe commonly have, being ſent into *Ho nan*, to viſit ſeveral places, obſerved, upon the top of a very high mountain, a kind of baſin, the circumference of which, formed by the mountain, was filled with different figures of fiſhes, ſhells, and marine plants, impreſſed upon ſtones: He ſaid to another mandarin, who accompanied him, " Certainly the ſea muſt have " been here: theſe fiſhes, ſhells, and, plants are

" found only in the ſea." F. Gaubil ſays, the Chineſe books pretend, that ſuch impreſſions are found upon the higheſt mountains of *Thibet*, and *See tchouen*. I had an opportunity myſelf to go into the mountains about Peking, and even went up to the higheſt, but ſaw nothing of this kind; and was informed upon the ſpot, that they never found any thing like them.

The greateſt part of the cinabar of China comes from the province of *Yun nan*: and it is ſaid, there is ſome alſo in *Kiang ſi*, *Hou kouang*, and *Koui tcheou*. *Kang hi*, the great-grandfather of the preſent emperor, ordered a general ſearch to be made thro' the whole empire for antimony, but found none in any of the mines.

I have the honour to be, with much reſpect and eſteem,

SIR,

Peking, Nov. 15, 1751.

Your moſt humble and obedient ſervant,

D'Incarville.